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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

KAYRISH, MATTHEW

ART UNIT	PAPER NUMBER
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2627

DATE MAILED: 06/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/807,644	HERTRICH, GREGORY P.	
	Examiner	Art Unit	
	Matthew G. Kayrish	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-6, 8-12, 18, 19 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Akiyama et al (US Patent Number 5406547).

Regarding claim 1, Akiyama et al disclose:

A data storage cartridge, comprising:

A storage medium (column 2, lines 16-20);

A housing (figure 1, item C) having at least one media access aperture (figure 2, item 9), the storage medium being provided within the housing such that at least one media access aperture exposes a surface of the storage medium (column 6, lines 20-24);
and

A shutter assembly (figure 3, items 10 and 14) movable from a closed position to an open position (figures 1/2 display open/closed), said shutter assembly comprising:

A cover (figure 3, item 10) configured to cover at least one media access aperture when the shutter assembly is in the closed position (See figure 1) and to expose at least one media access aperture when the shutter assembly is in the open position (See figure 2); and

A shutter cam (figure 3, item 14) coupled to the cover (column 6, lines 14-18), said shutter cam including a lock assembly (See figure 22) and a cam portion (figure 22, item 160).

Regarding claim 2, Akiyama et al disclose:

The data storage cartridge of claim 1, wherein said storage medium comprises a rotatable disk-shaped storage medium (column 1, lines 14-18).

Regarding claim 3, Akiyama et al disclose:

The data storage cartridge of claim 2, wherein at least one media access aperture exposes a radial region of the storage medium (column 1, lines 18-23).

Regarding claim 4, Akiyama et al disclose:

The data storage cartridge of claim 2, wherein said housing comprises:

A first media access aperture (figure 33, item 6 [Upper Shell] and aperture [9]) on a top side of the housing exposing a top side of a first radial region of the storage medium (column 1, lines 18-23); and

A second media access aperture (figure 34, item 7 [Lower Shell] and aperture [9]) on a bottom side of the housing exposing a bottom side of the first radial region of the storage medium (column 1, lines 18-23).

Regarding claim 5, Akiyama et al disclose:

The data storage cartridge of claim 1, wherein said storage medium comprises a holographic storage medium (column 1, lines 11-13).

Regarding claim 6, Akiyama et al disclose:

The data storage cartridge of claim 1, wherein:

Said lock assembly comprises a lock actuator (figure 22, item 59) having a locked position (figure 22, actuator [59] is in up position) and an unlocked position (actuator [59] is in the down position), such that when said lock actuator is in the locked position, the shutter assembly is inhibited from moving from the closed position to the open position, and when said lock actuator is in the unlocked position, the shutter assembly is permitted to move from the closed position to the open position (column 10, lines 37-56).

Regarding claim 8, Akiyama et al disclose:

The data storage cartridge of claim 6, wherein:

Said lock actuator comprises a projection (figure 30, item 60) that protrudes from a lock actuator aperture (figure 23, item 19 has hole) when the lock actuator is in the locked position (column 10, lines 37-44) and is recessed from the lock actuator aperture when the lock actuator is in the unlocked position (column 10, lines 57-67).

Regarding claim 9, Akiyama et al disclose:

The data storage cartridge of claim 8, wherein:

Said shutter cam defines a detent on a side of the housing (figure 23, item 19);
and

Said lock actuator aperture is provided within the detent (See figure 23, hole in detent [19]).

Regarding claim 10, Akiyama et al disclose:

The data storage cartridge of claim 9, wherein:

Said detent is defined by at least a back side (figure 24, item 53) and two opposing sides (figure 27, items 54 and 55); and

Said lock actuator aperture is provided on one of the two opposing sides (figure 24, dashed lines represent aperture).

Regarding claim 11, Akiyama et al disclose:

The data storage cartridge of claim 1, wherein at least one media access aperture exposes a partial surface of the storage medium (column 1, lines 18-21).

Regarding claim 12, Akiyama et al disclose everything repeated from claim 1, further disclosing:

A data storage cartridge, comprising:

A holographic storage medium (column 11-13);

A lock assembly for locking the cover in the closed position (See figure 22).

Regarding claim 18, Akiyama et al disclose:

A method of operating a data drive assembly configured to read data from a data storage cartridge comprising a storage medium contained within a housing, said housing comprising at least one media access aperture and a shutter assembly covering at least one media access aperture when in a closed position (See claim 1), the method comprising:

Unlocking a lock in the shutter assembly using a shutter opener (column 6, lines 54-58); and

Sliding the shutter assembly into an open position using the shutter opener (column 6, lines 58-60).

Regarding claim 19, Akiyama et al disclose:

The method of claim 18, wherein said unlocking the lock in the shutter assembly comprises:

Depressing a lock actuator with a boss portion of the shutter opener (column 10, lines 57-62).

Regarding claim 21, Akiyama et al disclose:

The method of claim 18, further comprising reading data from a holographic storage medium contained in the data storage cartridge (column 1, lines 18-21).

3. Claims 1, 6 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Akiyama et al.

Regarding claim 1, Akiyama et al disclose:

A data storage cartridge, comprising:

A storage medium (column 2, lines 16-20);

A housing (figure 1, item C) having at least one media access aperture (figure 2, item 9), the storage medium being provided within the housing such that at least one media access aperture exposes a surface of the storage medium (column 6, lines 20-24);
and

A shutter assembly (figure 3, items 10) movable from a closed position to an open position (figures 1/2 display open/closed), said shutter assembly comprising:

A cover (figure 3, item 11) configured to cover at least one media access aperture when the shutter assembly is in the closed position (See figure 1) and to expose at least one media access aperture when the shutter assembly is in the open position (See figure 2); and

A shutter cam (figure 22, item 14) coupled to the cover (figure 3, shutter cam [14] is coupled to cover [11] by screws [17]), said shutter cam including a lock assembly (figure 22, item 19) and a cam portion (figure 22, item 20).

Regarding claim 6, Akiyama et al disclose:

The data storage cartridge of claim 1, wherein:

Said lock assembly comprises a lock actuator (figure 22, item 55) having a locked position (figure 1, actuator [55] is in locked position) and an unlocked position (figure 2, actuator [14] is in the unlocked position), such that when said lock actuator is in the locked position, the shutter assembly is inhibited from moving from the closed position to the open position, and when said lock actuator is in the unlocked position, the shutter assembly is permitted to move from the closed position to the open position (column 10, lines 47-50).

Regarding claim 7, Akiyama et al disclose:

A direction of movement of the lock actuator (figure 22, item 55) from the locked position (See figure 1) to the unlocked position (See figure 2) is the same as a direction of movement of the shutter assembly from the closed position to the open position (lock actuator [55] is coupled to shutter assembly [10] via screws [17], therefore will move with shutter assembly, and will also actuate in the same direction as the shutter movement).

4. Claims 13-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Kang et al (US Publication Number 2002/0196730).

Regarding claim 13, Kang et al disclose:

A data drive assembly, comprising:

A data transfer mechanism for reading data from a storage medium contained in a data storage cartridge (figure 1, item 30); and

A shutter opening assembly (figure 5, item 150) configured to unlock and open a shutter on the data storage cartridge (page 2, paragraph 28).

Regarding claim 14, Kang et al disclose:

The data drive assembly of claim 13, wherein:

The shutter opening assembly comprises a boss configured to engage a lock release portion of the data storage cartridge (figure 5, pin is in contact with shutter at [24b]).

Regarding claim 15, Kang et al disclose:

The data drive assembly of claim 14, wherein:

The boss is further configured to apply a lateral force onto the shutter of the data storage cartridge to move the shutter into an open position (figure 5, lateral force is indicated by the arrow near shutter edge [24b]).

Regarding claim 16, Kang et al disclose:

The data drive assembly of claim 15, wherein:

The shutter opening assembly comprises a rotatable body portion (figure 5, body of shutter opener [150]), wherein the boss is positioned distal from the axis of rotation of

the body portion (figure 5, arcuate arrow near shutter opener [150] indicates rotation about pin at opposite end of contact with shutter [24b]).

Regarding claim 17, Kang et al disclose:

The data drive assembly of claim 13, further comprising:

A data storage cartridge having a shutter retained in the open position by the shutter opening assembly (page 2, paragraph 28).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Akiyama et al, in view of Kang et al.

Regarding claim 20, Akiyama et al disclose everything from claim 19, however, Akiyama et al fails to disclose:

Translating the data storage cartridge forward towards the boss portion of the shutter opener, said shutter opener being configured to rotate about an axis of rotation, the boss portion being distal from the axis of rotation;

After the data storage cartridge contacts the boss portion of the shutter opener, causing the data storage cartridge to apply a forward force on the boss portion, thereby

causing the shutter opener to rotate about the axis of rotation, wherein the rotation of the shutter opener causes the boss portion to travel laterally across the data storage cartridge.

Kang et al disclose:

Translating the data storage cartridge forward towards the boss portion of the shutter opener, said shutter opener being configured to rotate about an axis of rotation (page 2, paragraph 28), the boss portion being distal from the axis of rotation (See figure 5);

After the data storage cartridge contacts the boss portion of the shutter opener, causing the data storage cartridge to apply a forward force on the boss portion, thereby causing the shutter opener to rotate about the axis of rotation, wherein the rotation of the shutter opener causes the boss portion to travel laterally across the data storage cartridge (page 2, paragraph 28).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a method step of opening a shutter via a shutter opener, as taught by Kang et al, because the shutter will slide open by the lateral force of the shutter opener, therefore allowing the reading and writing head to access the data storage medium.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew G. Kayrish whose telephone number is 571-272-4220. The examiner can normally be reached on 8am - 5pm M-F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea Wellington can be reached on 571-272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

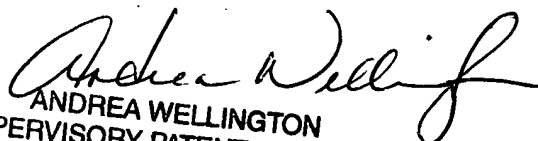
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6/7/2006

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